
lawwenda - Plugin API Documentation

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Lawwenda has a plugin interface which allows to add functionality to the core from outside.

TODO not yet available

API REFERENCE

1.1 lawwenda package

1.1.1 Subpackages

lawwenda.previewers package

Submodules

lawwenda.previewers.commonimages module

class lawwenda.previewers.commonimages.CommonImagesPreviewer

Bases: *lawwenda.previewers.Previewer*

_abc_impl = <_abc_data object>

is_previewable (*iar*)

Return if this previewer is able to generate an html preview snippet for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also *preview_html()*.

Parameters *iar* – An object that describes the file.

is_thumbnailable (*iar*)

Return if this previewer is able to generate a thumbnail for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also *thumbnail()*.

Parameters *iar* – An object that describes the file.

preview_html (*node*)

Return an html snippet that shows a preview of a file.

This is larger and richer in terms of flexibility than thumbnails, and is typically used by the file details panel.

See also *is_previewable()*.

Parameters *node* – The file to preview.

thumbnail (*node*)

Return a thumbnail for a file in PNG format.

See also [`is_thumbnailable\(\)`](#).

Parameters **node** – The file to generate a thumbnail for.

lawwenda.preview.commonvideos module

class lawwenda.preview.commonvideos.CommonVideosPreviewer

Bases: [`lawwenda.preview.Previewer`](#)

__ffmpeg_thumb (*stdin=- 3*)

Parameters

- **inputpath** (*str*) –
- **stdin** (*Any*) –

Return type bytes

_abc_impl = **<_abc_data object>**

is_previewable (*iar*)

Return if this previewer is able to generate an html preview snippet for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also [`preview_html\(\)`](#).

Parameters **iar** – An object that describes the file.

is_thumbnailable (*iar*)

Return if this previewer is able to generate a thumbnail for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also [`thumbnail\(\)`](#).

Parameters **iar** – An object that describes the file.

preview_html (*node*)

Return an html snippet that shows a preview of a file.

This is larger and richer in terms of flexibility than thumbnails, and is typically used by the file details panel.

See also [`is_previewable\(\)`](#).

Parameters **node** – The file to preview.

thumbnail (*node*)

Return a thumbnail for a file in PNG format.

See also [`is_thumbnailable\(\)`](#).

Parameters **node** – The file to generate a thumbnail for.

Module contents

class lawwenda.previewers.IsAbleRequest (*name*, *mimetype*)

Bases: object

Information about a particular file, used for asking a *Previewer* if it can provide some functionality for that file.

Instances of this class are used as an argument to some *Previewer* methods.

The available infos are not very rich for performance reasons.

Parameters

- **name** (*str*) –
- **mimetype** (*str*) –

Return type None

mimetype: *str*

name: *str*

class lawwenda.previewers.Previewer

Bases: abc.ABC

Base class for previewers.

Subclasses implement thumbnail and preview functionality for particular file formats.

_abc_impl = <_abc_data object>

_image_scale_to_thumbnail_size (*imgdata*)

Parameters *imgdata* (*BinaryIO*) –

Return type *_io.BytesIO*

abstract is_previewable (*iar*)

Return if this previewer is able to generate an html preview snippet for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also *preview_html()*.

Parameters *iar* (*lawwenda.previewers.IsAbleRequest*) – An object that describes the file.

Return type bool

abstract is_thumbnailable (*iar*)

Return if this previewer is able to generate a thumbnail for a file.

Note that this decision has to be made with very few information, e.g. without knowing the file content, for performance reasons.

See also *thumbnail()*.

Parameters *iar* (*lawwenda.previewers.IsAbleRequest*) – An object that describes the file.

Return type bool

abstract preview_html (*node*)

Return an html snippet that shows a preview of a file.

This is larger and richer in terms of flexibility than thumbnails, and is typically used by the file details panel.

See also *is_previewable()*.

Parameters *node* (*lawwenda.fs.Filesystem.Node*) – The file to preview.

Return type *str*

thumbheight = 300

abstract thumbnail (*node*)

Return a thumbnail for a file in PNG format.

See also *is_thumbnailable()*.

Parameters *node* (*lawwenda.fs.Filesystem.Node*) – The file to generate a thumbnail for.

Return type *bytes*

thumbsize = (300, 300)

thumbwidth = 300

lawwenda.search package

Module contents

class *lawwenda.search.ByGeoSearch* (*position*, *radius*)

Bases: *lawwenda.search.Search*

Searches for files that are associated with a particular geographic region.

See also *lawwenda.fs.Filesystem.Node.geo*.

Parameters

- **position** (*str*) –
- **radius** (*str*) –

__decide (*node*)

Parameters *node* (*FilesystemNode*) –

Return type *bool*

query (*node*)

Return a list of nodes that match the criteria of this search, starting from a given root node.

Parameters *node* – The root node. Query result nodes are usually inside that subtree.

class *lawwenda.search.ByNameSearch* (*term*)

Bases: *lawwenda.search.Search*

Searches for search terms in file names.

See also *lawwenda.fs.Filesystem.Node.name*.

Parameters *term* (*str*) –

__decide (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `bool`

query (*node*)

Return a list of nodes that match the criteria of this search, starting from a given root node.

Parameters `node` – The root node. Query result nodes are usually inside that subtree.

class `lawwenda.search.ByTagSearch` (*term*)

Bases: `lawwenda.search.Search`

Searches for files that have particular tags.

See also `lawwenda.fs.FileSystem.Node.tags`.

Parameters `term` (*str*) –

__decide (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `bool`

query (*node*)

Return a list of nodes that match the criteria of this search, starting from a given root node.

Parameters `node` – The root node. Query result nodes are usually inside that subtree.

class `lawwenda.search.DeeplySearch` (*term*)

Bases: `lawwenda.search.Search`

Deep searches look for search terms in some places, like file names or comments, but also in fulltext indexes or - as a fallback - directly in the content of each file.

This is a rather versatile search behavior, but is not precisely defined, and can be impractically slow if not fulltext index is available.

Parameters `term` (*str*) –

__decide_unindexed (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `bool`

__decide_unindexed_by_content (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `bool`

__decide_unindexed_by_metadata (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `bool`

__query_indexed (*idxdata*)

Parameters

- `node` (*FileSystemNode*) –
- `idxdata` (*object*) –

Return type `FileSystemNodes`

__query_unindexed ()

Parameters `node` (*FileSystemNode*) –

Return type `FileSystemNodes`

__try_get_index (*node*)

Parameters `node` (*FileSystemNode*) –

Return type `object`

query (*node*)

Return a list of nodes that match the criteria of this search, starting from a given root node.

Parameters `node` – The root node. Query result nodes are usually inside that subtree.

class `lawwenda.search.Search`

Bases: `object`

Base class for different search behaviors.

query (*node*)

Return a list of nodes that match the criteria of this search, starting from a given root node.

Parameters `node` (*FileSystemNode*) – The root node. Query result nodes are usually inside that subtree.

Return type `FileSystemNodes`

`lawwenda.search._query_by_tree_traversal` (*node*, *decidefct*)

Parameters

- **node** (*FileSystemNode*) –
- **decidefct** (*Callable*[[*FileSystemNode*], *bool*]) –

Return type `FileSystemNodes`

`lawwenda.search._termstring_to_termlist` (*term*)

Parameters **term** (*str*) –

Return type `List[str]`

`lawwenda.search.create_search` (*mode*, ***kwargs*)

Return a Search object with a particular configuration.

Parameters

- **mode** (*str*) – The search mode string.
- **kwargs** – Additional search arguments, specific to the chosen *mode*.

Return type `lawwenda.search.Search`

lawwenda.sharehttpapp package

Submodules

lawwenda.sharehttpapp.davprop module

class `lawwenda.sharehttpapp.davprop.CommentDavProp`

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.DavProp (davname, *, is_writable)
```

Bases: `object`

Parameters

- **davname** (*str*) –
- **is_writable** (*bool*) –

property `davname`

Return type `str`

Return type `str`

Return type `str`

Return type `str`

get_for_node (*fsnode*)

Parameters **fsnode** (`lawwenda.fs.Filesystem.Node`) –

Return type `Optional[str]`

property `is_writable`

Return type `bool`

Return type `bool`

Return type `bool`

Return type `bool`

```
class lawwenda.sharehttpapp.davprop.GeoDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.MtimeDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.RatingDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.ResourceTypeDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.SizeDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
class lawwenda.sharehttpapp.davprop.TagsDavProp
```

Bases: `lawwenda.sharehttpapp.davprop.DavProp`

get_for_node (*fsnode*)

```
lawwenda.sharehttpapp.davprop.get_prop_by_davname (davname)
```

Parameters **davname** (*str*) –

Return type Optional[*lawwenda.sharehttpapp.davprop.DavProp*]

lawwenda.sharehttpapp.davprop.register_prop(prop)

Parameters *prop* (Type[*DavProp*]) –

Return type Type[*lawwenda.sharehttpapp.davprop.DavProp*]

Module contents

class *lawwenda.sharehttpapp.ShareHttpApp*(*filesystem*)

Bases: object

A wsgi application that provides an http interface to a filesystem.

It provides bare http access, and also WebDAV extensions for a more complete interface. It does not provide an own user interface.

Parameters *filesystem* (*lawwenda.fs.Filesystem*) –

property *__allowed_methods*

Return type t.List[str]

Return type t.List[str]

Return type t.List[str]

Return type t.List[str]

__method_copy (*request, fsnode, *, xfermethod='copy_to'*)

Parameters

- **request** (*lawwenda.comm.Request*) –
- **fsnode** (*lawwenda.fs.Filesystem.Node*) –
- **xfermethod** (*str*) –

__method_delete (*request, fsnode*)

Parameters

- **request** (*lawwenda.comm.Request*) –
- **fsnode** (*lawwenda.fs.Filesystem.Node*) –

__method_get (*request, fsnode, is_head_request=False*)

Parameters

- **request** (*lawwenda.comm.Request*) –
- **fsnode** (*lawwenda.fs.Filesystem.Node*) –
- **is_head_request** (*bool*) –

__method_head (*request, fsnode*)

Parameters

- **request** (*lawwenda.comm.Request*) –
- **fsnode** (*lawwenda.fs.Filesystem.Node*) –

__method_mkcol (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

`_method_move` (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

`_method_options` (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

`_method_propfind` (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

`_method_proppatch` (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

`_method_put` (*request, fsnode*)

Parameters

- **request** (`lawwenda.comm.Request`) –
- **fsnode** (`lawwenda.fs.Filesystem.Node`) –

1.1.2 Submodules

1.1.3 lawwenda.comm module

Internal communication helpers.

class `lawwenda.comm.JsonedResponse` (*data, **kwargs*)

Bases: `werkzeug.wrappers.response.Response`

A werkzeug response that serializes response data to json.

Parameters **data** (*Optional[Any]*) – Response data. Can be anything that *json* is able to serialize.

class `lawwenda.comm.Request` (*environ, populate_request=True, shallow=False*)

Bases: `werkzeug.wrappers.request.Request`, `werkzeug.wrappers.json.JSONMixin`

A werkzeug request that is able to interpret json data in the response body.

1.1.4 lawwenda.datafiles module

`lawwenda.datafiles.find_data_file(fname, searchdirs=None)`

Return the absolute path of a Lawwenda data file.

Can return *None* if no such file exists.

Parameters

- **fname** (*str*) – The name of the file to find.
- **searchdirs** (*Optional[Iterable[str]]*) – List of directories to look into. If not specified (as it usually should be), it looks at some usual places.

Return type *Optional[str]*

1.1.5 lawwenda.devserver module

class `lawwenda.devserver._DevServerInfo(svr, svrthread)`

Bases: `object`

shutdown ()

Return type *None*

property url

Return type *str*

Return type *str*

Return type *str*

Return type *str*

wait_stopped ()

Return type *None*

class `lawwenda.devserver._DevServerThread(svr)`

Bases: `threading.Thread`

This constructor should always be called with keyword arguments. Arguments are:

group should be *None*; reserved for future extension when a `ThreadGroup` class is implemented.

target is the callable object to be invoked by the `run()` method. Defaults to *None*, meaning nothing is called.

name is the thread name. By default, a unique name is constructed of the form “Thread-N” where N is a small decimal number.

args is the argument tuple for the target invocation. Defaults to `()`.

kwargs is a dictionary of keyword arguments for the target invocation. Defaults to `{}`.

If a subclass overrides the constructor, it must make sure to invoke the base class constructor (`Thread.__init__()`) before doing anything else to the thread.

run ()

Method representing the thread’s activity.

You may override this method in a subclass. The standard `run()` method invokes the callable object passed to the object’s constructor as the target argument, if any, with sequential and keyword arguments taken from the *args* and *kwargs* arguments, respectively.

`lawwenda.devserver.get_running_dev_servers()`

Return the servers started by `run_dev_server()` that are currently running.

Return type `Iterable[lawwenda.devserver._DevServerInfo]`

`lawwenda.devserver.run_dev_server(cfg)`

Start a tiny local server for a given configuration.

Such a server can be used for trying, development, testing, and so on, but is not recommended for real usage.

It will automatically find a free port and will return a control object that contains the full url, and more.

Parameters `cfg` (`lawwenda.Configuration`) – The configuration.

Return type `lawwenda.devserver._DevServerInfo`

1.1.6 lawwenda.fmapp module

class `lawwenda.fmapp.FmApp` (`share`)

Bases: `object`

Parameters `share` (`lawwenda.Share`) –

`__auth` (`username`, `password`)

Parameters

- `username` (`str`) –
- `password` (`str`) –

Return type `bool`

`__dispatch_request` (`request`)

`__dispatch_request_internals` (`request`)

`__dispatch_request_normal` (`request`)

`__ensure_authed` (`request`)

`__on_api_copymove` (`request`, `action`)

`__render_template` (`template`, `*`, `html_head_inner=""`, `path=""`, `headonly=False`,
`url_internals_name='~__lawwenda__int~'`, `**kwargs`)

Parameters

- `template` (`str`) –
- `html_head_inner` (`str`) –
- `path` (`str`) –
- `headonly` (`bool`) –
- `url_internals_name` (`str`) –

Return type `werkzeug.wrappers.response.Response`

`__render_template_text` (`template`, `*`, `csrftoken`, `html_head_inner`, `**kwargs`)

Parameters

- `template` (`str`) –
- `csrftoken` (`str`) –

```
    • html_head_inner (str) –  
        Return type str  
__render_template_text_raw (template, **kwargs)  
    Parameters template (str) –  
        Return type str  
__on_api_copy (request)  
__on_api_delete (request)  
__on_api_details (request)  
__on_api_dir (request)  
__on_api_known_tags (_)  
__on_api_mkdir (request)  
__on_api_move (request)  
__on_api_rename (request)  
__on_api_set_comment (request)  
__on_api_set_geo (request)  
__on_api_set_rating (request)  
__on_api_tag_entries (request)  
__on_api_thumbnail (request)  
__on_api_untag_entries (request)  
__on_api_upload (request)  
__on_api_zip (request)  
__on_api_zip_download (request, zipid)  
__on_help (_)  
__on_static (_, filepath)  
url_internals_name = '~__lawwenda__int~'  
class lawwenda.fmapp._RenderTemplateValue (s)  
    Bases: object  
    property unescape  
class lawwenda.fmapp._TempZips  
    Bases: object  
    class _TempZip (nodes)  
        Bases: object  
        Parameters nodes (List [lawwenda.fs.Filesystem.Node]) –  
            __TempZip__is_executable (node)  
                Parameters node (lawwenda.fs.Filesystem.Node) –  
                Return type bool  
            __TempZip__putnode (node, zipf)  
                Parameters
```

- `node` (`lawwenda.fs.Filesystem.Node`) –
- `zipf` (`zipfile.ZipFile`) –

Return type `None`

property `bytes`

classmethod `_TempZips__cleanup_loop()`

`_cleanup_thread = None`

`_lock = <unlocked _thread.lock object>`

`_zips = {}`

classmethod `create_tempzip(owner, nodes)`

Parameters

- `owner` (`object`) –
- `nodes` (`List[lawwenda.fs.Filesystem.Node]`) –

Return type `str`

classmethod `get_tempzip(owner, zipid)`

Parameters

- `owner` (`object`) –
- `zipid` (`str`) –

Return type `Optional[bytes]`

1.1.7 lawwenda.fs module

class `lawwenda.fs.AbstractFilesystemDecorator` (*inner*)
Bases: `lawwenda.fs.Filesystem`

Parameters `inner` (`lawwenda.fs.Filesystem`) –

`_eval_predicate` (*pred, node*)

exception `lawwenda.fs.CircularTraversalError`
Bases: `OSError`

class `lawwenda.fs.ExcludeNodesFilesystemAdapter` (*inner, pred*)
Bases: `lawwenda.fs.AbstractFilesystemDecorator`

Parameters

- `inner` (`lawwenda.fs.Filesystem`) –
- `pred` (`Callable[[Filesystem.Node], bool]`) –

`child_nodes` (*handle*)

Parameters `handle` (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `List[lawwenda.fs.Filesystem.Node]`

`get_readhandle` (*node*)

`get_writehandle` (*node*)

class `lawwenda.fs.Filesystem`
Bases: `object`

```
class Node(path, *, filesystem)
    Bases: object

    Parameters

        • path(str) –

        • filesystem(Filesystem) –

    property _filesystem
        Return type Filesystem
        Return type Filesystem
        Return type Filesystem
        Return type Filesystem

    add_tag(tag)
        Parameters tag(str) –
        Return type None

    property basics_as_dict

    child_by_name(name)
        Parameters name(str) –
        Return type lawwenda.fs.Filesystem.Node

    property child_nodes
        Return type t.List[“Filesystem.Node”]
        Return type t.List[“Filesystem.Node”]
        Return type t.List[“Filesystem.Node”]
        Return type t.List[“Filesystem.Node”]

    property comment
        Return type str
        Return type str
        Return type str
        Return type str

    copy_to(newpath)
        Parameters newpath(str) –
        Return type None

    delete()
        Return type None

    property dirpath
        Return type str
        Return type str
        Return type str
        Return type str

    property exists
        Return type bool
        Return type bool
        Return type bool
        Return type bool

    property full_as_dict

    property geo
        Return type str
        Return type str
```

Return type str
Return type str

property geo_obj
Return type pimetadatainterpreter.GeoLocation
Return type pimetadatainterpreter.GeoLocation
Return type pimetadatainterpreter.GeoLocation
Return type pimetadatainterpreter.GeoLocation

property has_preview
Return type bool
Return type bool
Return type bool
Return type bool

property has_thumbnail
Return type bool
Return type bool
Return type bool
Return type bool

property icon_name
Return type t.Optional[str]
Return type t.Optional[str]
Return type t.Optional[str]
Return type t.Optional[str]

property is_dir
Return type bool
Return type bool
Return type bool
Return type bool

property is_file
Return type bool
Return type bool
Return type bool
Return type bool

property is_hidden
Return type bool
Return type bool
Return type bool
Return type bool

property is_link
Return type bool
Return type bool
Return type bool
Return type bool

property is_writable
Return type bool
Return type bool
Return type bool
Return type bool

property mimetype
Return type str

Return type str
Return type str
Return type str

`mkdir()`
Return type None

`move_to(newpath)`
Parameters `newpath(str)` –
Return type None

`property mtime`
Return type datetime.datetime
Return type datetime.datetime
Return type datetime.datetime
Return type datetime.datetime

`property mtime_ts`
Return type float
Return type float
Return type float
Return type float

`property name`
Return type str
Return type str
Return type str
Return type str

`property parent_node`
Return type *Filesystem.Node*
Return type *Filesystem.Node*
Return type *Filesystem.Node*
Return type *Filesystem.Node*

`property path`
Return type str
Return type str
Return type str
Return type str

`property preview_html`
Return type str
Return type str
Return type str
Return type str

`property rating`
Return type int
Return type int
Return type int
Return type int

`read_file()`
Return type BinaryIO

`remove_tag(tag)`
Parameters `tag(str)` –
Return type None

```
set_comment (comment)
    Parameters comment (str) –
    Return type None

set_geo (geo)
    Parameters geo (str) –
    Return type None

set_rating (rating)
    Parameters rating (int) –
    Return type None

property size
    Return type int
    Return type int
    Return type int
    Return type int

property tags
    Return type t.List[str]
    Return type t.List[str]
    Return type t.List[str]
    Return type t.List[str]

property tagstring
    Return type str
    Return type str
    Return type str
    Return type str

thumbnail ()
    Return type bytes

traverse_dir (*, raise_on_circle, param_path="")
    Parameters
        • raise_on_circle (bool) –
        • param_path (str) –
    Return type Iterable[Tuple[lawwenda.fs.Filesystem.Node, str]]

try_get_fullpath (*, writable)
    Parameters writable (bool) –
    Return type Optional[str]

write_file (content)
    Parameters content (Union[bytes, BinaryIO]) –
    Return type None

class ReadHandle (node)
    Bases: object
```

Read and write handles are just a stupid container that hold one *Filesystem.Node*.

This looks stupid at first, because you could just use this node directly instead. The added value of handles are a central mechanism for access control, which would be a bit less obvious and more scattered in code without this indirection.

Of course it cannot avoid a way around it in code. An attacker that can change the code has won anyway. It just simplifies writing correct code that hopefully does not provide ways around it for the client.

See *Filesystem.get_readhandle()* and *Filesystem.get_writehandle()*.

Parameters `node` (`Filesystem.Node`) –

class `WriteHandle` (`node`)
Bases: `lawwenda.fs.Filesystem.ReadHandle`
See `Filesystem.ReadHandle`.

Parameters `node` (`Filesystem.Node`) –

add_tag (`handle`, `tag`)

Parameters

- **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –
- **tag** (`str`) –

Return type `None`

child_nodes (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `List[lawwenda.fs.Filesystem.Node]`

comment (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `str`

copy_to (`srchandle`, `desthandle`)

Parameters

- **srchandle** (`lawwenda.fs.Filesystem.ReadHandle`) –
- **desthandle** (`lawwenda.fs.Filesystem.WriteHandle`) –

Return type `None`

delete (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –

Return type `None`

exists (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

geo (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `lawwenda._aux.PiMetadataInterpreter.pimetadainterpreter.GeoLocation`

get_readhandle (`node`)

Parameters **node** (`lawwenda.fs.Filesystem.Node`) –

Return type `lawwenda.fs.Filesystem.ReadHandle`

get_writehandle (`node`)

Parameters **node** (`lawwenda.fs.Filesystem.Node`) –

Return type `lawwenda.fs.Filesystem.WriteHandle`

has_preview (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

has_thumbnail (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

is_dir (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

is_file (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

is_hidden (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

is_link (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bool`

known_tags ()

Return type `List[str]`

mimetype (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `str`

mkdir (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –

Return type `None`

move_to (*srchandle*, *desthandle*)

Parameters

- **srchandle** (`lawwenda.fs.Filesystem.WriteHandle`) –
- **desthandle** (`lawwenda.fs.Filesystem.WriteHandle`) –

Return type `None`

mtime (*handle*)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `datetime.datetime`

node_by_path (*path*)

Parameters **path** (*str*) –

Return type *lawwenda.fs.Filesystem.Node*

preview_html (*handle*)

Parameters **handle** (*lawwenda.fs.Filesystem.ReadHandle*) –

Return type str

rating (*handle*)

Parameters **handle** (*lawwenda.fs.Filesystem.ReadHandle*) –

Return type int

read_file (*handle*)

Parameters **handle** (*lawwenda.fs.Filesystem.ReadHandle*) –

Return type BinaryIO

remove_tag (*handle, tag*)

Parameters

- **handle** (*lawwenda.fs.Filesystem.WriteHandle*) –
- **tag** (*str*) –

Return type None

property rootnode

Return type *Filesystem.Node*

Return type *Filesystem.Node*

Return type *Filesystem.Node*

Return type *Filesystem.Node*

static sanitize_abspath (*path*)

Sanitizes slashes in a path and returns a path in the form */foo/bar*. Precisely:

- with a slash in the beginning
- without a slash at the end (exception: root path)
- without double slashes
- with *..* and *.* resolved
- root path: */*

Parameters **path** (*str*) – The input path.

Return type str

set_comment (*handle, comment*)

Parameters

- **handle** (*lawwenda.fs.Filesystem.WriteHandle*) –
- **comment** (*str*) –

Return type None

set_geo (*handle, geo*)

Parameters

- **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –

- **geo** (`str`) –

Return type `None`

set_rating (`handle`, `rating`)

Parameters

- **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –

- **rating** (`int`) –

Return type `None`

size (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `int`

tags (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `List[str]`

thumbnail (`handle`)

Parameters **handle** (`lawwenda.fs.Filesystem.ReadHandle`) –

Return type `bytes`

try_get_fullpath (`handle`, `*`, `writable`)

Parameters

- **handle** (`Union[Filesystem.ReadHandle, Filesystem.WriteHandle]`) –

- **writable** (`bool`) –

Return type `Optional[str]`

write_file (`handle`, `content`)

Parameters

- **handle** (`lawwenda.fs.Filesystem.WriteHandle`) –

- **content** (`Union[bytes, BinaryIO]`) –

Return type `None`

class `lawwenda.fs.HideNodesFilesystemAdapter` (`inner`, `pred`)

Bases: `lawwenda.fs.AbstractFilesystemDecorator`

Parameters

- **inner** (`lawwenda.fs.Filesystem`) –

- **pred** (`Callable[[Filesystem.Node], bool]`) –

is_hidden (`handle`)

class `lawwenda.fs.LocalFilesystem` (`rootpath`)

Bases: `lawwenda.fs.Filesystem`

Parameters **rootpath** (`str`) –

__path_to_fullpath (*path*)

Parameters *path* (*str*) –

Return type *str*

add_tag (*handle*, *tag*)

child_nodes (*handle*)

comment (*handle*)

copy_to (*srchandle*, *desthandle*)

delete (*handle*)

exists (*handle*)

geo (*handle*)

get_readhandle (*node*)

get_writehandle (*node*)

has_preview (*handle*)

has_thumbnail (*handle*)

is_dir (*handle*)

is_file (*handle*)

is_hidden (*handle*)

is_link (*handle*)

known_tags ()

mimetype (*handle*)

mkdir (*handle*)

move_to (*srchandle*, *desthandle*)

mtime (*handle*)

preview_html (*handle*)

rating (*handle*)

read_file (*handle*)

remove_tag (*handle*, *tag*)

set_comment (*handle*, *comment*)

set_geo (*handle*, *geo*)

set_rating (*handle*, *rating*)

size (*handle*)

tags (*handle*)

thumbnail (*handle*)

try_get_fullpath (*handle*, *, *writable*)

write_file (*handle*, *content*)

```
class lawwenda.fs.ReadOnlyFileSystemAdapter(inner)
    Bases: lawwenda.fs.AbstractFileSystemDecorator

    Parameters inner (lawwenda.fs.FileSystem) –
    get_writehandle (node)

class lawwenda.fs._PredicateFactory
    Bases: object

    static excludehidden (node)
    static false (node)
    static p_descending (pred)
    static p_not (pred)
    static p_or (*preds)
    static p_regexp (restr)
    static p_tag (tag)

lawwenda.fs.create_filesystem(rootpath, *, readonly, hide_by_patterns=(), hide_by_tags=(),
                             include_by_patterns=None, include_by_tags=None,
                             exclude_by_patterns=(), exclude_by_tags=(), ex-
                             clude_hidden=False)
```

Parameters

- **rootpath** (*str*) –
- **readonly** (*bool*) –
- **hide_by_patterns** (*Iterable[str]*) –
- **hide_by_tags** (*Iterable[str]*) –
- **include_by_patterns** (*Optional[Iterable[str]]*) –
- **include_by_tags** (*Optional[Iterable[str]]*) –
- **exclude_by_patterns** (*Iterable[str]*) –
- **exclude_by_tags** (*Iterable[str]*) –
- **exclude_hidden** (*bool*) –

Return type *lawwenda.fs.FileSystem*

1.1.8 lawwenda.lawwenda_cli module

The Lawwenda command line interface.

This tool is used by the end user for creating and managing shares and more. It can be called with some command line arguments for a particular action, or without parameters (which will open an interactive Python prompt for further actions).

Do not use this module in code. See [lawwenda.Configuration](#) instead.

```
lawwenda.lawwenda_cli._fmt_cmd(txt)
```

Parameters **txt** (*str*) –

Return type *str*

`lawwenda.lawwenda_cli._quickstart(cfgpath)`

Parameters `cfgpath` (*str*) –

Return type `str`

`lawwenda.lawwenda_cli.add_share(*, cfg, name, path, title, active_until, hide_by_pattern, hide_by_tag, include_by_pattern, include_by_tag, exclude_by_pattern, exclude_by_tag, exclude_hidden, readonly)`

Add a share.

See `lawwenda.Configuration.add_share()`.

Parameters

- `cfg` (`lawwenda.Configuration`) –
- `name` (*str*) –
- `path` (*str*) –
- `title` (*str*) –
- `active_until` (*str*) –
- `hide_by_pattern` (`List[str]`) –
- `hide_by_tag` (`List[str]`) –
- `include_by_pattern` (`List[str]`) –
- `include_by_tag` (`List[str]`) –
- `exclude_by_pattern` (`List[str]`) –
- `exclude_by_tag` (`List[str]`) –
- `exclude_hidden` (*bool*) –
- `readonly` (*bool*) –

Return type `None`

`lawwenda.lawwenda_cli.console(*, cfg)`

Open an interactive Python console.

The user will get a small help text and is then able to configure Lawwenda by typing Python code.

Parameters `cfg` (`lawwenda.Configuration`) – The initial value for the `cfg` variable inside the console.

Return type `None`

`lawwenda.lawwenda_cli.describe_share(*, cfg, name)`

Return a textual share description (i.e. how it is configured) for a share.

Parameters

- `cfg` (`lawwenda.Configuration`) –
- `name` (*str*) –

Return type `str`

`lawwenda.lawwenda_cli.generate_wsgi(*, cfg)`

Parameters `cfg` (`lawwenda.Configuration`) –

Return type `str`

`lawwenda.lawwenda_cli.list_shares(*, cfg)`

Return a list of share names as string, one line for each share.

Parameters `cfg` (`lawwenda.Configuration`) –

Return type `str`

`lawwenda.lawwenda_cli.main()`

Parse command line arguments and call the right function with its arguments.

`lawwenda.lawwenda_cli.remove_share(*, cfg, name)`

Remove a share.

See `lawwenda.Configuration.remove_share()`.

Parameters

- `cfg` (`lawwenda.Configuration`) –
- `name` (`str`) –

Return type `None`

`lawwenda.lawwenda_cli.run_dev_server(*, cfg)`

Parameters `cfg` (`lawwenda.Configuration`) –

Return type `None`

1.1.9 lawwenda.server module

class `lawwenda.server.Server(*, cfgpath=None)`

Bases: `object`

Parameters `cfgpath` (`Optional[str]`) –

class `_ShareAppInst(share)`

Bases: `object`

Parameters `share` (`lawwenda.Share`) –

property `app`

Return type `lawwenda.fmapp.FmApp`

Return type `lawwenda.fmapp.FmApp`

Return type `lawwenda.fmapp.FmApp`

Return type `lawwenda.fmapp.FmApp`

property `is_active`

Return type `bool`

Return type `bool`

Return type `bool`

Return type `bool`

__get_app_for_share (`sharename`)

Parameters `sharename` (`str`) –

1.1.10 Module contents

User side API for reading and modifying Lawwenda configurations, creating shares, and more.

For most cases, instantiate *Configuration* and use some of its methods.

class `lawwenda.Configuration` (*cfgpath=None*)

Bases: `object`

Parameters `cfgpath` (*Optional[str]*) – The path of the configuration directory. Will be created on demand if it does not exist. Defaults to a location that is usual for your operating system.

__verify_valid_name ()

Parameters `name` (*str*) –

Return type `None`

add_share (*path*, ***, *name*, *password*, *title=None*, *readonly=True*, *hide_by_patterns=()*, *hide_by_tags=()*, *include_by_patterns=None*, *include_by_tags=None*, *exclude_by_patterns=()*, *exclude_by_tags=()*, *exclude_hidden=False*, *active_until=None*)

Add a new share.

Parameters

- **path** (*str*) – The directory to share. See *Share.path*.
- **name** (*str*) – The unique name of the new share. See *Share.name*.
- **password** (*Optional[str]*) – The password to protect the share with.
- **title** (*Optional[str]*) – The share title. See *Share.title*.
- **readonly** (*bool*) – If to share in a read-only way. See *Share.readonly*.
- **hide_by_patterns** (*Iterable[str]*) – See *Share.hide_by_patterns*.
- **hide_by_tags** (*Iterable[str]*) – See *Share.hide_by_tags*.
- **include_by_patterns** (*Optional[Iterable[str]]*) – See *Share.include_by_patterns*.
- **include_by_tags** (*Optional[Iterable[str]]*) – See *Share.include_by_tags*.
- **exclude_by_patterns** (*Iterable[str]*) – See *Share.exclude_by_patterns*.
- **exclude_by_tags** (*Iterable[str]*) – See *Share.exclude_by_tags*.
- **exclude_hidden** (*bool*) – See *Share.exclude_hidden*.
- **active_until** (*Optional[datetime.datetime]*) – The optional expiration time of the share. See *Share.active_until*.

Return type *lawwenda.Share*

generate_wsgi ()

Return type `str`

get_share_by_name (*name*)

Return the share by a name (or *None* if it does not exist).

Parameters `name` (*str*) –

Return type `Optional[lawwenda.Share]`

get_shares()

Return all shares that are currently part of this configuration.

Return type List[[lawwenda.Share](#)]

property path

The path of the configuration directory.

Return type str

Return type str

Return type str

Return type str

peek_share_cache_tag(name)

Parameters **name** (str) –

Return type Optional[object]

remove_share(name)

Remove a share.

Parameters **name** (str) – The name of the share to remove.

Return type None

run_dev_server()

Return type [lawwenda.devserver.DevServerInfo](#)

class [lawwenda.Share](#)(*path, *, configuration, name, title, readonly=True, hide_by_patterns=(), hide_by_tags=(), include_by_patterns=None, include_by_tags=None, exclude_by_patterns=(), exclude_by_tags=(), exclude_hidden=False, password_scrypt=None, password_salt=None, active_until_timestamp=None*)

Bases: object

A directory path together with some parameters (e.g. for access control) for sharing via Lawwenda. Read the documentation for more about shares.

This class is not intended to be instantiated directly. You will get instances by some other api methods.

Parameters

- **path** (str) –
- **configuration** ([Configuration](#)) –
- **name** (str) –
- **title** (str) –
- **readonly** (bool) –
- **hide_by_patterns** ([Iterable\[str\]](#)) –
- **hide_by_tags** ([Iterable\[str\]](#)) –
- **include_by_patterns** ([Optional\[Iterable\[str\]\]](#)) –
- **include_by_tags** ([Optional\[Iterable\[str\]\]](#)) –
- **exclude_by_patterns** ([Iterable\[str\]](#)) –
- **exclude_by_tags** ([Iterable\[str\]](#)) –
- **exclude_hidden** (bool) –

- **password_scrypt** (*Optional[str]*) –
- **password_salt** (*Optional[str]*) –
- **active_until_timestamp** (*Optional[float]*) –

_set_cache_tag (*cachetag*)

Parameters **cachetag** (*object*) –

Return type `None`

_to_dict ()

property active_until

The expiration time of this share, or *None* for infinite.

Return type `t.Optional[datetime.datetime]`

Return type `t.Optional[datetime.datetime]`

Return type `t.Optional[datetime.datetime]`

Return type `t.Optional[datetime.datetime]`

property active_until_timestamp

Same as *active_until*, but as Unix timestamp.

Return type `t.Optional[float]`

Return type `t.Optional[float]`

Return type `t.Optional[float]`

Return type `t.Optional[float]`

property cache_tag

Return type `object`

Return type `object`

Return type `object`

Return type `object`

property configuration

The configuration that contains this share.

Return type *Configuration*

Return type *Configuration*

Return type *Configuration*

Return type *Configuration*

property exclude_by_patterns

A list of regular expressions of paths for excluding.

A file or directory will be excluded if its path matches at least one of them. Those paths are always relative to *path*, always start with a '/', but never end with a one (unless it is the root path).

Exclusions are enforced on backend side and not just a presentation aspect. There is no way for a client to work around that (unless there is a software bug).

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

property `exclude_by_tags`

A list of tags for excluding files and directories.

Exclusions are enforced on backend side and not just a presentation aspect. There is no way for a client to work around that (unless there is a software bug).

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

property `exclude_hidden`

If to consider 'hidden' flags of files or directories as exclusions.

Exclusions are enforced on backend side and not just a presentation aspect. There is no way for a client to work around that (unless there is a software bug).

Return type `bool`

Return type `bool`

Return type `bool`

Return type `bool`

property `hide_by_patterns`

A list of regular expressions of paths for hiding.

A file or directory will be hidden if its path matches at least one of them. Those paths are always relative to `path`, always start with a '/', but never end with a one (unless it is the root path).

Note that hiding is not a security feature unless `exclude_hidden` is set.

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

property `hide_by_tags`

A list of tags for hiding files and directories.

A file or directory will be hidden if it is tagged with at least one of them.

Note that hiding is not a security feature unless `exclude_hidden` is set.

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

Return type `t.Iterable[str]`

property `include_by_patterns`

A list of regular expressions of paths for including explicitly.

Those paths are always relative to `path`, always start with a '/', but never end with a one (unless it is the root path).

If this is specified, the share will switch from blacklist to whitelist. Everything that is not considered as included is implicitly considered as excluded.

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

property include_by_tags

A list of tags for including files and directories.

If this is specified, the share will switch from blacklist to whitelist. Everything that is not considered as included is implicitly considered as excluded.

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

Return type `t.Optional[t.Iterable[str]]`

property is_active

If this share is currently active (e.g. not yet expired; see [*active_until*](#)).

Return type `bool`

Return type `bool`

Return type `bool`

Return type `bool`

property name

The share name.

This usually makes the last part of the url to this share. Is unique in the containing [*configuration*](#).

Return type `str`

Return type `str`

Return type `str`

Return type `str`

property password_salt

The hash salt of the password for this share, if password protected.

See also [*password_script*](#).

Return type `t.Optional[str]`

Return type `t.Optional[str]`

Return type `t.Optional[str]`

Return type `t.Optional[str]`

property password_script

The script hash of the password for this share.

Empty or *None* for disabled password protection. See also [*password_salt*](#).

Return type `t.Optional[str]`

Return type t.Optional[str]

Return type t.Optional[str]

Return type t.Optional[str]

property path

The path of the share's root directory.

Return type str

Return type str

Return type str

Return type str

property readonly

If this share is restricted to only read actions (no removal, copying, uploading, editing, ... of the files and directories in *path*).

Return type bool

Return type bool

Return type bool

Return type bool

property title

The share title.

This is an arbitrary text shown in the window title. Should not contain line breaks and should be short.

Return type str

Return type str

Return type str

Return type str

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